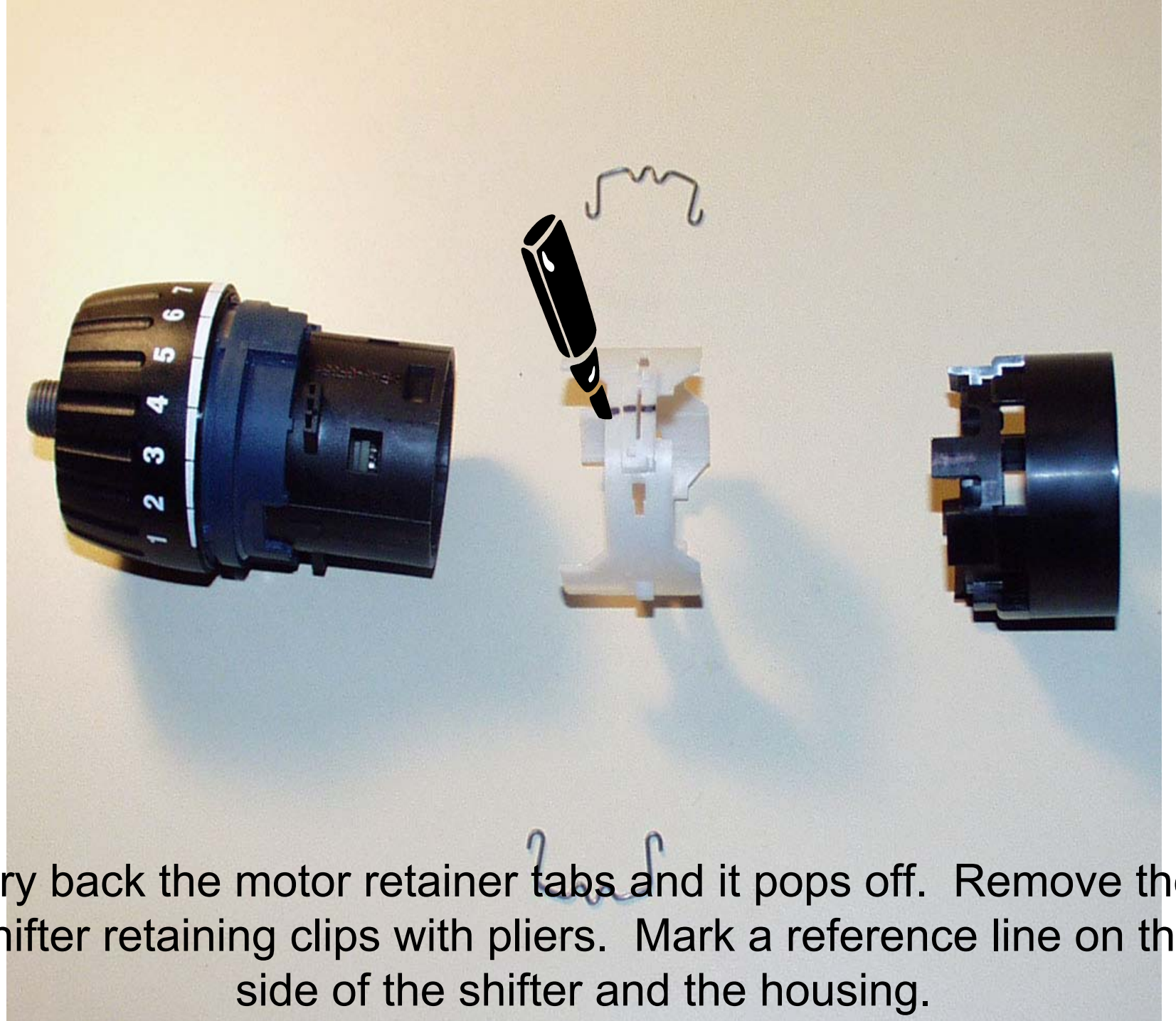
Disassembly Of The Bosch 2606200917 Gearbox

Team 116

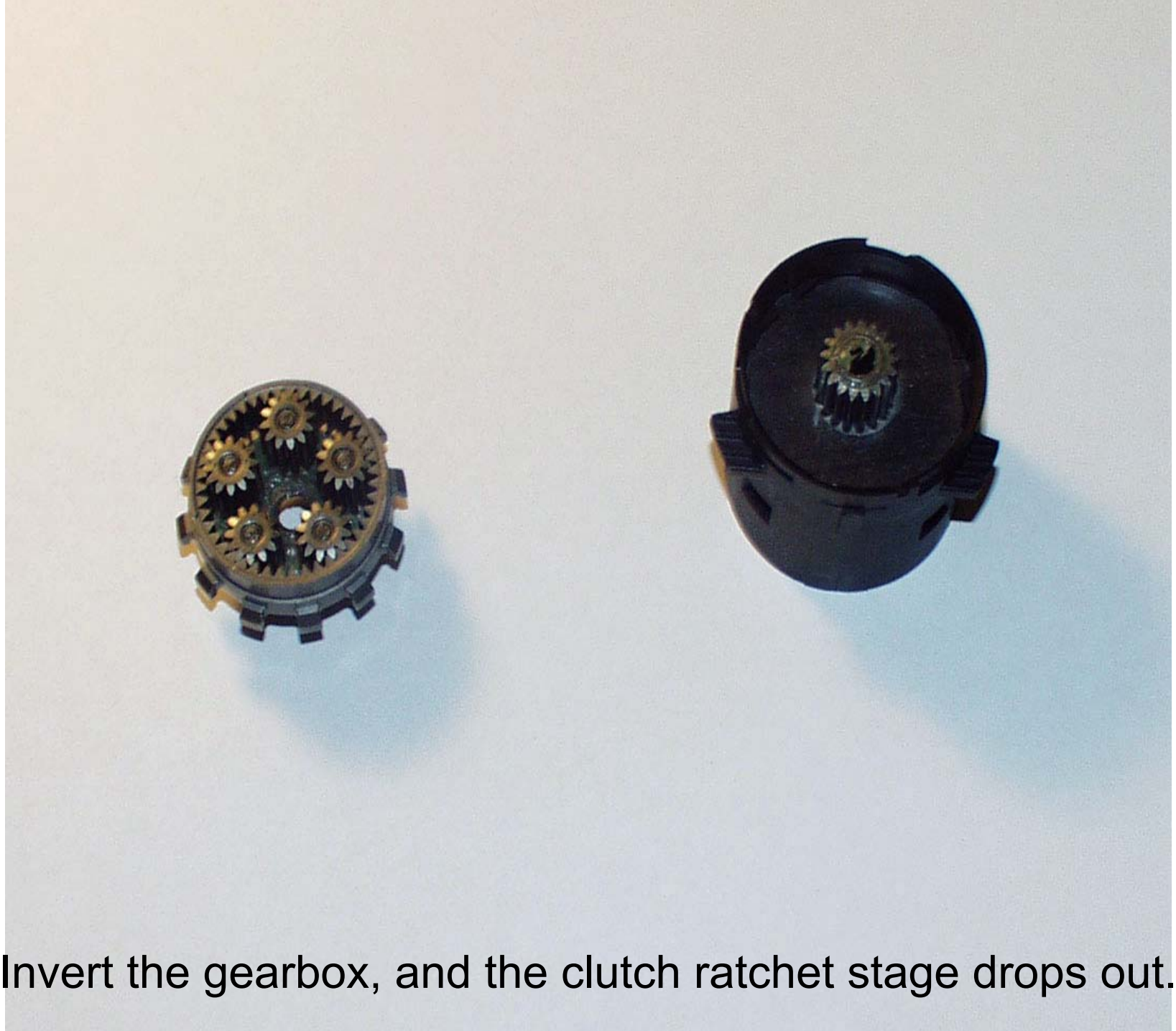
FIRST Robotics Competition 2003

Start here!

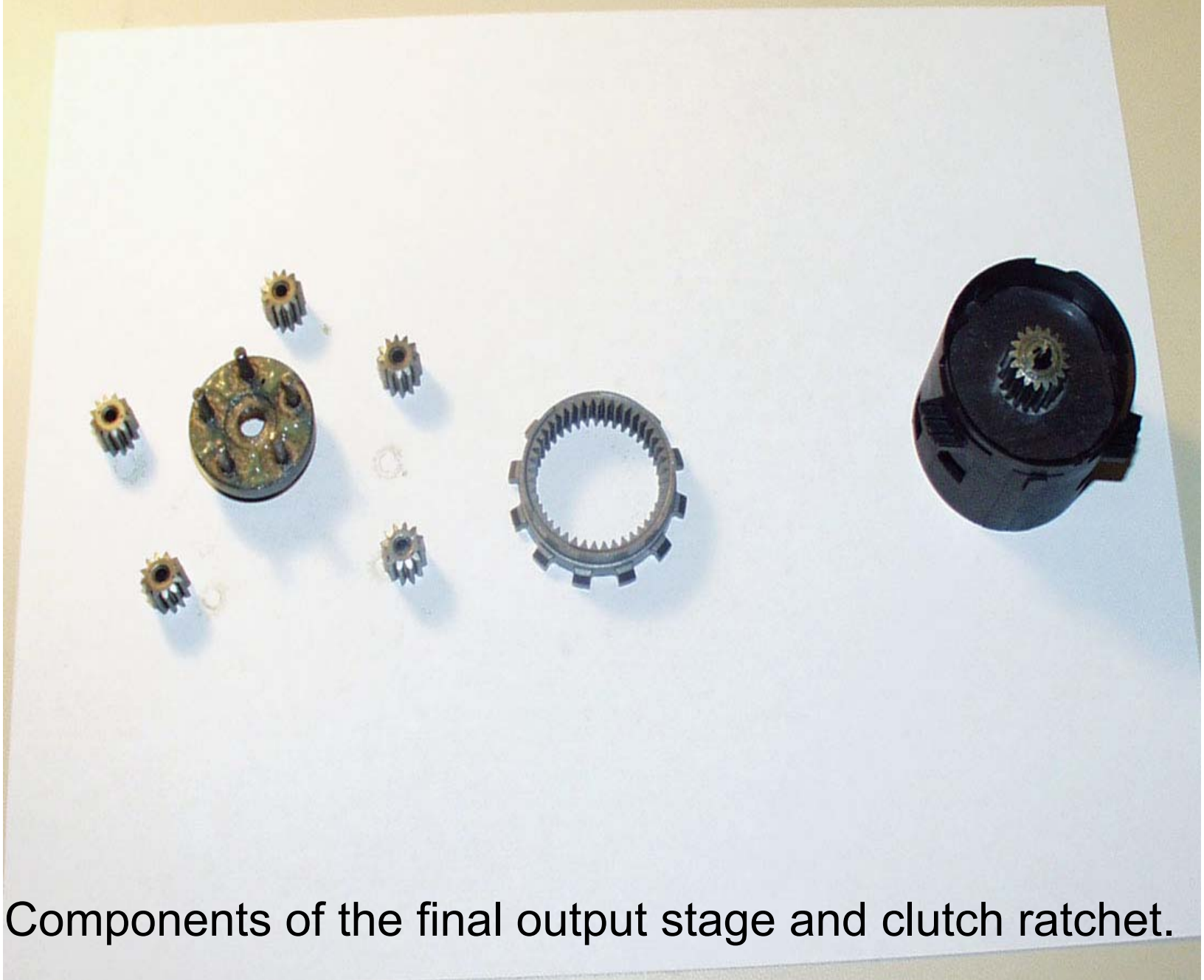


Pry back the motor retainer tabs and it pops off. Remove the shifter retaining clips with pliers. Mark a reference line on the side of the shifter and the housing.

Twist the clutch housing counter-clockwise until it pops off.
Remove the clutch ring, anti-backdrive rollers and sprag.



Invert the gearbox, and the clutch ratchet stage drops out.



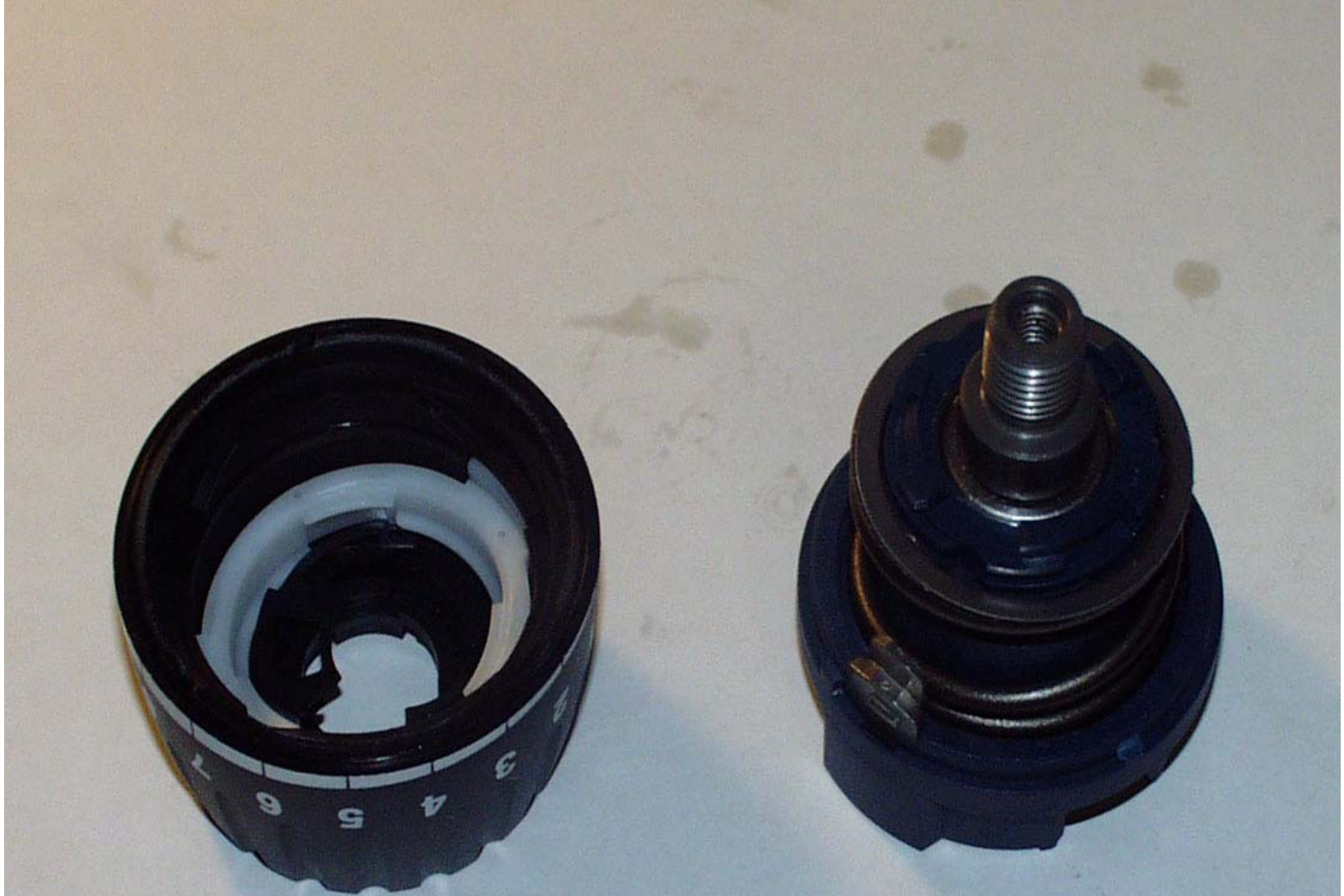
Components of the final output stage and clutch ratchet.

Invert the gearbox housing, and carefully pry out the retaining plate with needle-nose pliers

First stage planetary gears can be removed. One ring gear alignment bump has a longer “leg” to orient it in the housing.

The second planetary gear stage and shifting ring gear can now be removed.

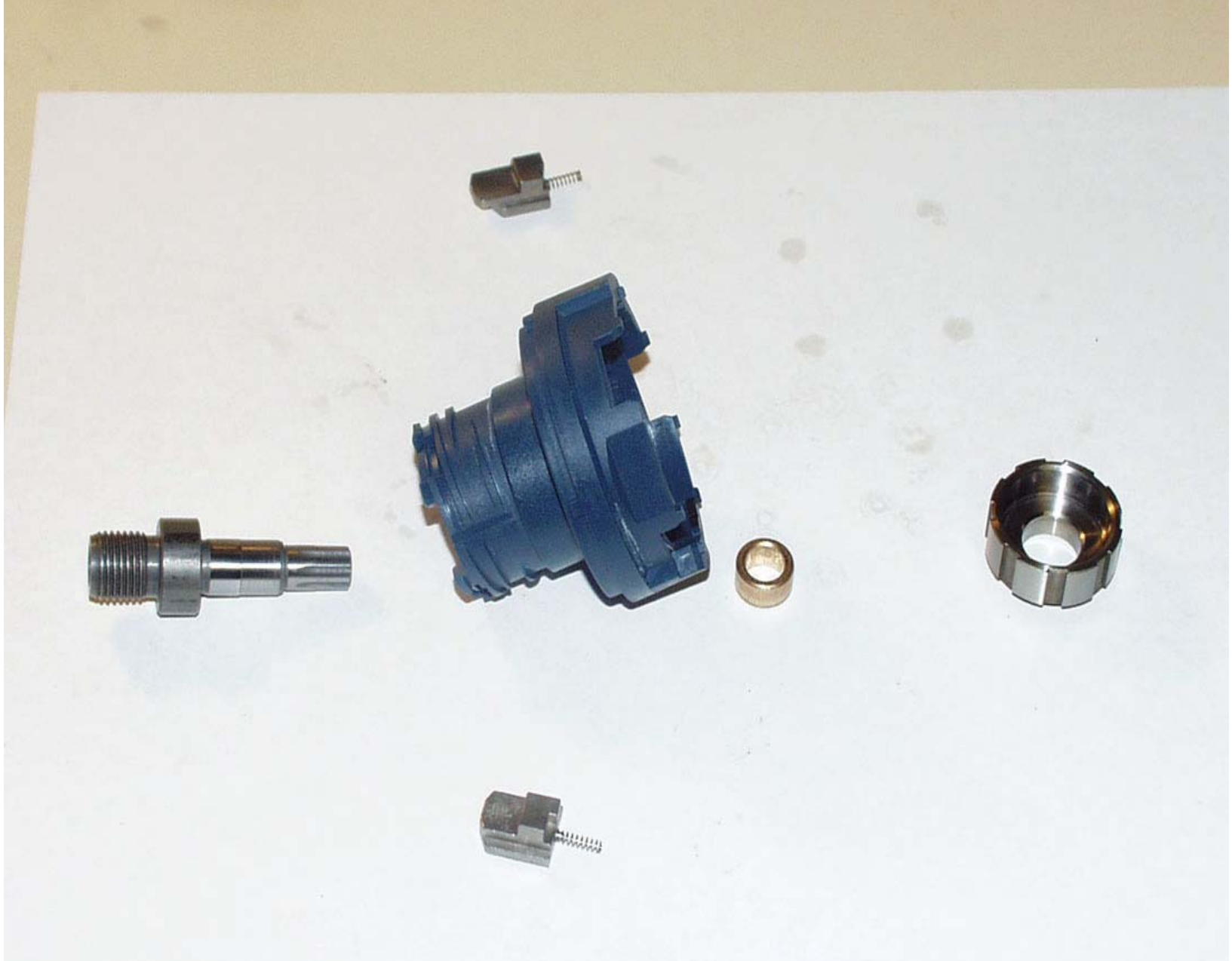
The outer clutch housing can be pressed off.



Clutch housings, and the clutch “nose” with spring and load ring.

Remove the spring and load ring.

The clutch pressure tabs pop out. The rear output shaft bearing can be removed by lightly tapping the output shaft.



The output shaft can be pressed out of the nose bearing from the back.

Now all you have to do is…

- Reverse engineer the output shaft
- Throw away the output shaft, anti-backdrive rollers, sprag, final stage gear spider, outer clutch housings, clutch spring, clutch load ring, output shaft rear bearing, shifting ring, shifter retaining clips
- Manufacture a new output shaft
- Manufacture shifter locking ring
- Braze clutch ring to clutch ratchet
- Lubricate gearbox components
- Reassemble gearbox
- Install new gearbox on robot